

Listing of Claims:

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[]]. In brief, claims 29, 30, 33-35, 40, 83, 88, and 89 have been amended; claim 87 has been canceled, without prejudice; and new claim 90 has been added.

1-27. (Canceled)

28. (Previously Presented) The kit of claim 83, wherein the probe is photoluminescent.

29. (Currently Amended) The kit of claim 28, wherein the photoluminescence lifetime of the probe is greater than the rotational correlation time of the unbound probe and less than the rotational correlation time of the complex formed by binding of the substrate or the product to the probe, member or member product, and mass label.

30. (Currently Amended) The kit of claim 83, wherein the probe is bound binds to the substrate member noncovalently.

31. (Canceled)

32. (Canceled)

33. (Currently Amended) The kit of claim 83, wherein the mass label includes a plurality of binding moieties that bind to the substrate such that the

mass label is capable of specifically binding to more than one substrate or product molecule at the same time member.

34. (Currently Amended) The kit of claim 83, the mass label being a first mass label, the kit further comprising a second mass label capable of specifically binding to at least one of the substrate member, [[the]] a complex formed by binding of the probe to the substrate member, the member product, and the first mass label, but not to the probe alone.

35. (Currently Amended) The kit of claim 34, wherein the second mass label is capable of specifically binding to at least two first mass labels, so that the second mass label may form crosslinks between molecules of the substrate members.

36. (Original) The kit of claim 34, wherein the second mass label includes at least one of the following: avidin, biotin, lectin, sugar, and an immunological binding partner.

37. (Previously Presented) The kit of claim 83, wherein the probe is not normally present in the sample.

38. (Previously Presented) The kit of claim 83, wherein the mass label is not normally present in the sample.

39. (Previously Presented) The kit of claim 83, wherein the property of the probe is related to a rotational diffusion coefficient of the probe.

40. (Currently Amended) The kit of claim 39, wherein the property may be measured using a technique selected from the group consisting of polarization[[,]] and light scattering, and magnetic resonance.

41. (Previously Presented) The kit of claim 83, wherein the property of the probe is related to the translational diffusion coefficient of the probe.

42-82. (Canceled)

83. (Currently Amended) A kit for detecting enzyme the presence and/or activity of an analyte in a sample, the kit comprising:

an enzyme;

a luminescent probe bound to a member, where the member is a compound that specifically binds to the analyte, or is a substrate for the enzyme analyte; and

a particulate mass label distinct from the enzyme and capable of specifically binding to one of the member and the complex formed by binding of the member to the analyte, or one of the substrate member and or [[the]] a product of the substrate produced by action of the enzyme analyte on the substrate member, but not both;

wherein a luminescence measurable property of the probe is sensitive to the size of the complex formed by binding of the mass label , probe, and the member, member-analyte complex, or member to the substrate or product.

84. (Previously Presented) The kit of claim 83, wherein the particulate mass label is selected from the group consisting of a macromolecule, a dendrimer, a glass bead, a latex bead, a polyacrylnitrile bead, and a liposome.

85. (Previously Presented) The kit of claim 83, wherein the particulate mass label is a bead.

86. (Previously Presented) The kit of claim 83, wherein the particulate mass label is a colloidal metal or a nanocrystal.

87. (Canceled)

88. (Currently Amended) The kit of claim 83 [[87]], wherein the mass label is capable of binding specifically to the product, and wherein the luminescence measurable property of the probe is different for the probe bound to the enzyme substrate than for [[the]] a complex of the probe, the member product, and the mass label.

89. (Currently Amended) The kit of claim 88, wherein the luminescence measurable property may be measured using fluorescence polarization.

90. (New) The kit of claim 83, wherein the enzyme converts the probe bound to the substrate into a probe bound to the product, wherein the mass label is capable of binding specifically to the substrate, and wherein the luminescence property of the probe is different for the probe bound to the product than for a complex of the probe, the substrate, and the mass label.